AMENDMENTS TO THE CLAIMS:

The following listing of claims will replace all prior versions of claims in the application:

1. (Currently Amended) A method for testing AC coupled interconnects of a circuit having at least one driving IC and at least one receiving IC that are coupled together by at least one AC coupled interconnection, each IC having a plurality of boundary scan cells (BSCs), an instruction register, and a TAP controller, the method comprising the steps of:

shifting an AC test stimulus into the BSCs of the at least one driving IC, the AC test stimulus having a plurality of voltage transitions;

scanning an initiate AC test instruction into the instruction register of both ICs;

performing an execute AC test instruction by moving the TAP controller to the *Run-Test/Idle* state and holding the TAP controller of both ICs in the *Run-Test/Idle* state for the time required to complete execution of the AC test instruction, wherein, during the *Run-Test/Idle* controller state, the at least one driving IC is applying the AC test stimulus to the at least one AC coupled interconnection and the at least one receiving IC is sampling ~~the~~ a received signal embodying captured AC test instruction results;

transferring the captured AC test instruction results into the BSCs of the at least one receiving IC; and

scanning out the captured AC test instruction results.

2. (Original) The method as defined in claim 1, further comprising the step of evaluating the captured AC test instruction results.

3. (Original) The method as defined in claim 1, further comprising the step of generating a second AC test stimulus and repeating the steps of shifting, scanning, performing, transferring and scanning out with the second AC test stimulus.

4. (Original) The method as defined in claim 3, further comprising the step of evaluating the captured AC test instruction results for the second AC test stimulus.

5. (Currently Amended) A system for testing AC coupled interconnects of a circuit having at least one driving IC and at least one receiving IC that are coupled together by at least one AC coupled interconnection, each IC having a plurality of boundary scan cells (BSCs), an instruction register, and a TAP controller, the system comprising:

means for shifting an AC test stimulus into the BSCs of the at least one driving IC, the AC test stimulus having a plurality of voltage transitions;

means for scanning an initiate AC test instruction into the instruction register of both ICs;

means for performing an execute AC test instruction by moving the TAP controller to the *Run-Test/Idle* state and holding the TAP controller of both ICs in the *Run-Test/Idle* state for the time required to complete execution of the AC test instruction, wherein, during the *Run-Test/Idle* controller state, the at least one driving IC is applying the AC test stimulus to the at least one AC coupled interconnection and the at least one receiving IC is sampling ~~the~~ a received signal embodying captured AC test instruction results;

means for transferring the captured AC test instruction results into the BSCs of the at least one receiving IC; and

means for scanning out the captured AC test instruction results.

6. (Original) The system as defined in claim 5, further comprising means for evaluating the captured AC test instruction results.

7. (Original) The system as defined in claim 5, further comprising means for generating a second AC test stimulus.

8. (Original) The system as defined in claim 7, further comprising means for evaluating the captured AC test instruction results for the second AC test stimulus.

9-12. (Canceled)

13. (Currently Amended) A system of testing AC coupled interconnects comprising:

at least one driving IC having a plurality of boundary scan cells (BSCs), an instruction register, and a TAP controller;

at least one receiving IC having a plurality of BSCs ~~boundary scan cells (BSCs)~~, an instruction register, and a TAP controller; and

at least one AC coupled interconnection that couples the at least one driving IC to the at least one receiving IC;

wherein the BSCs of the at least one driving IC are capable of receiving an AC test stimulus having a plurality of voltage transitions, the instruction register of both ICs are capable of receiving an initiate AC test instruction, the TAP controller of both ICs is capable of being moved to and held in the *Run-Test/Idle* state for the time required to complete execution of the AC test instruction, wherein, during the *Run-Test/Idle* controller state, the at least one driving IC is applying the AC test stimulus to the at least one AC coupled interconnection and the at least

one receiving IC is sampling ~~the~~ a received signal embodying captured AC test instruction results, and the BSCs of the at least one receiving IC are capable of receiving and scanning out the captured AC test instruction results.

14-24. (Canceled)

25. (Currently Amended) A system of testing AC coupled interconnects having at least one AC coupled interconnection and at least one driving IC having a plurality of boundary scan cells (BSCs), an instruction register, and a TAP controller, wherein the BSCs of the at least one driving IC are capable of receiving an AC test stimulus having a plurality of voltage transitions, the instruction register of the at least one driving IC is capable of receiving an initiate AC test instruction, and the TAP controller of the at least one driving IC is capable of being moved to and held in the *Run-Test/Idle* state for the time required to complete execution of the AC test instruction, the system comprising:

at least one receiving IC having a plurality of BSCs ~~boundary scan cells (BSCs)~~, an instruction register, and a TAP controller, wherein the at least one AC coupled interconnection couples the at least one driving IC to the at least one receiving IC, the instruction register of the at least one receiving IC is capable of receiving an initiate AC test instruction, the TAP controller of the at least one receiving IC is capable of being moved to and held in the *Run-Test/Idle* state for the time required to complete execution of the AC test instruction, wherein, during the *Run-Test/Idle* controller state, the at least one driving IC is applying the AC test stimulus to the at least one AC coupled interconnection and the at least one receiving IC is sampling ~~the~~ a received signal embodying captured AC test instruction results, and the BSCs of

the at least one receiving IC are capable of receiving and scanning out the captured AC test instruction results.

26. (Currently Amended) A system of testing AC coupled interconnects having at least one AC coupled interconnection and at least one receiving IC having a plurality of boundary scan cells (BSCs), an instruction register, and a TAP controller, wherein the instruction register of the at least one receiving IC is capable of receiving an initiate AC test instruction, the TAP controller of the at least one receiving IC is capable of being moved to and held in the *Run-Test/Idle* state for the time required to complete execution of the AC test instruction, the at least one receiving IC is capable of sampling a received signal embodying captured AC test instruction results, and the BSCs of the at least one receiving IC are capable of receiving and scanning out the captured AC test instruction results, the system comprising:

at least one driving IC having a plurality of BSCs ~~boundary scan cells (BSCs)~~, an instruction register, and a TAP controller, wherein the at least one AC coupled interconnection couples the at least one driving IC to the at least one receiving IC, the BSCs of the at least one driving IC are capable of receiving an AC test stimulus having a plurality of voltage transitions, the instruction register of the at least one driving IC is capable of receiving an initiate AC test instruction, the TAP controller of the at least one driving IC is capable of being moved to and held in the *Run-Test/Idle* state for the time required to complete execution of the AC test instruction, and wherein, during the *Run-Test/Idle* controller state, the at least one driving IC is applying the AC test stimulus to the at least one AC coupled interconnection and the at least one receiving IC is sampling the received signal.